The Total Solar Irradiance Sensor (TSIS) is a dual-instrument package that will acquire solar irradiance during the current decade as part of the Joint Polar Satellite System (JPSS). Originally de-manifested during the 2006 National Polar-orbiting Operational Environmental Satellite System (NPOESS) restructuring, TSIS was restored following a decision by the NPOESS Executive Committee because of its critical role in determining the natural forcings of the climate system and the high priority given it by the 2007 Earth Science Decadal Survey. Further restructuring of NPOESS, with climate sensors transitioning to JPSS, will insure the continuity of the solar irradiance Climate Data Record (CDR) through TSIS. TSIS is comprised of the Total Irradiance Monitor, or TIM, which measures the total solar irradiance (TSI) that is incident at the outer boundaries of the atmosphere; and the Spectral Irradiance Monitor, or SIM, which measures solar spectral irradiance (SSI) from 200 nm to 2400 nm (96 percent of the TSI). The TSIS TIM and SIM are heritage instruments to those currently flying on the NASA Solar Irradiance and Climate Experiment (SORCE). Both were selected as part of the TSIS because of their unprecedented measurement accuracy and stability, and because both measurements are essential to constraining the energy input to the climate system and interpreting the response of climate to external forcing. This talk will describe those attributes of TSIS which uniquely define its capability to continue the 31-year record of TSI, extend the newer 6-year record of SSI, and insure the stewardship of the solar irradiance Climate Data Record into the future.